



AN OVERVIEW ON NATURAL FLORISTIC COMPOSITION OF LUCKNOW UNIVERSITY, INDIA

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ABSTRACT

A study was conducted to explore the overall floristic composition of the main campus of Lucknow University (India) spreading over an area of about 90 acres. This study investigates the total flora of lucknow university that include angiosperm, gymnosperm, pteridophyte, bryophyte, algae are summarized in table 1. Total of 325 plants were recorded of which only 7 species of pteridophyte from (4 family), 10 species of algae from (2 family), 5 species of gymnosperm from (2 family) and rest of the plant represented by angiospermic plants. Except gymnosperm, all the plant is naturally growing in the campus. A total of 260 species of herbaceous plant species were reported representing 79.02% of the total floristic composition of the campus. Natural tree species were only 42 in number constituting 12.76% of the total floristic composition of the campus whereas shrubs were 18 in number constituting only 5.47% of the total natural flora of university of lucknow. The least representation was that by the undershrubs, that is 9 in number representing only 2.73% of the total natural vascular flora of the university of lucknow campus. Thus the herbs are the dominant constituents of the floristic composition of university of lucknow campus. The Campus flora contain medicinal plant, timber yielding plant, oil yielding plants, fodder plants, fruity plants along with flowering and ornamental. This flora also comprises in to exotic and non-exotic type.

KEYWORDS: Lucknow University, Medicinal Flora, Fabaceae, Spice Crops and Families.

Introduction

The great temple of learning, the University of Lucknow grew out of the prestigious Canning College, Lucknow, [1] founded in 1867 by Raja Dakshinaranjan Mukherjee and also grew out of King George's Medical College and the Isabella Thoburn College. Lucknow University was set up as a result of the far-reaching recommendations of the Sadler Commission which had been set up in 1917 to just investigate the conditions and prospects of the University of Calcutta [2]. Lucknow University was established in law by the Governor General on November 25, 1920 [3]. Sir Harcourt Butler laid the foundation stone of the University on March 19, 1921, and Dr. Gyanendra Nath Chakravarti became its first vice-chancellor [4]. On July 17, 1921 classes commenced [5]. There are so many faculties and departments in the university out of which Botany department is a big department of science faculty which was founded during university establishment. The first head of the department was late Prof. Birbal Sahni which was a great Paleobotanist founded Birbal Sahni Institute of Paleobotany, Lucknow and Department of Geology. Many other names associated with botany department Prof. Ram Udar (Bryologist), Prof. S.C. Agrawala (Plant Nutrition), Prof. Raghuvanshi (Genetic) etc contributed their talent in the field of teaching and research.

The university main campus spreading over 90 acres of land on which the university originally was established has well maintained roads with extensive greenery all along and is encompassed by wall all around it. More than ninety years old, the main university campus has a dense flora. However, large number of the woody flora, which includes trees, shrubs and climbers were planted either as avenue plantations or shade trees and ornamental plants along roads side, in the gardens of residential compounds and departments, while several of them have also regenerated by themselves. The main objective of the present study was to analyze the naturally occurring vascular flora of the main campus of Lucknow University.

Material and methods

University of Lucknow main Campus is located in the mid of Lucknow city on the Western bank of river Gomti (26.50° North and 80.50° East.), on leveled topography at an elevation of 123 meters above sea level. The Lucknow district belongs to Indo-Gangetic plains physiographic division of India. Campus, spreads over 90 acres of land area is encompassed by a wall all around it. The soil is of alluvial type formed by the deposition of sediments of river Gomti, which is fertile with sandy loam texture. Lucknow has a warm humid subtropical climate with cool, dry winters from December to February and dry, hot summers from April to June. The rainy season is from mid-June to mid-September, when Lucknow gets an average rainfall of 896.2 millimetres (35.28 in) from the south-west monsoon winds, and occasionally frontal rainfall will occur in January. In winter the maximum temperature is around 25 °C (77 F) and the minimum is in the 3 °C (37 F) to 7 °C (45 F) range [6]. Fog is quite common from late December to late January. Summers are extremely hot with temperatures rising to the 40 °C (104 F) to 45 °C (113 F) range, the average highs being in the high of 30s (degree Celsius). On January 9, 2013 Lucknow recorded its temperature of -0.7 °C (31F), lowest in 49 years [7].

Field observation

An extensive field study was conducted from Feb 2012 to March 2013 to record the floristic diversity growing in the campus of University of Lucknow. Visit was made alternate month so total visit was six. During the process of observation, visits were made to every nook and corner of the University Campus in search of plant. The investigation for the flora included the main boundary surrounding the University campus, locality of University hostels, Departments, buildings represented by residence, gardens academic and administrative buildings etc. The identification of plant species was done using taxonomic literatures [8, 9].

This investigation include all types of plant, naturally growing on the side of street, in lawn, garden, wire and glass houses and these include agricultural crops, ornamentals, wild grasses natives and exotic plants species.

Results and discussion

This study investigates the total flora of lucknow university that include angiosperm, gymnosperm, pteridophyte, bryophyte, algae are summarized in table 1. Total of 325 plants were recorded of which only 7 species of pteridophyte from (4 family), 10 species of algae from (2 family), 5 species of gymnosperm from (2 family) and rest of the plant represented by angiospermic plants. Except gymnosperm, all the plant is naturally growing in the campus. A total of 260 species of herbaceous plant species were reported representing 79.02% of the total floristic composition of the campus. Natural tree species were only 42 in number constituting 12.76% of the total floristic composition of the campus whereas shrubs were 18 in number constituting only 5.47% of the total natural flora of university of lucknow. The least representation was that by the under-shrubs, that is 9 in number representing only 2.73% of the total natural vascular flora of the university of lucknow campus. Thus the herbs are the dominant constituents of the floristic composition of university of lucknow campus. Furthermore, of the 260 herbs reported from the campus, 201 were represented by the annual herbs. Natural aquatic species were only 8 in number constituting 5% of the total floristic composition of the campus. The garden and lawn of the campus comprises of perennial and seasonal flowering and non-flowering plants which may be naturally occurring or planted. These include perennial tree species viz *Mangifera indica*, *Spondias pinnata*, *Annona squamosa*, *Alstonia scholaris*, *Nerium olender*, *Tabernaemontana divaricata*, *Cocos nucifera*, *Carica Papaya*, *Casuarinas equisetifolia*, *Shorea robusta*, *Diospyros montana*, *Delonix regia*, *Saraca asoca*, *Senna siamea*, *Beutea monosperma*, *Tamarindus indica*, *Callindira haematocephala*, *Dalbergia sissoo*, *Bombax ceiba*, *Azadirachta indica*, *Ficus benghalensis*, *Ficus religiosa*, *Morus nigra*, *Artocarpus lacucha*, *Artocarpus heterophyllus*, *Musa balbisiana*, *Eucalyptus leucoxylon*, *Syzygium cumini*, *Psidium guajava*, *Phoenix sylvestris*, *Bomboo*, *Ziziphus mauritiana*, *Neolamarckia cadamba*, *Citrus sinensis*, *Aegle marmelos*, *Santalum album*, *Madhuca longifolia*, *Holoptelia integrifolia*, *Pinus sabiniana*, *Cycus revolute*, *Cycus sircinallis*, *Cycus rouxbergii*, *Cupressus* etc. A vast composition of these tree species in campus provided a shady rural environment helps for inhabiting a large number of birds and others. Shrub species like *Carissa carandas*, *Calotropis procera*, *Calotropis gigantea*, *Dracaena reflexa*, *Opuntia litralis*, *Cereus hildmannianus*, *Ferocactus echidne*, *Terminalia belerica*, *Euphobia pulcherrima*, *Jatropha pandurifolia* Etc. are the example of keystone species growing in the campus of Lucknow University. Some species of aquatic plants belonging to different families was also recorded growing in the small ponds of campus. These aquatic plants are the *Lemna minor*, *Hydrilla verticillata*, *Trapa natans*, *Nilumbo nucifera*, *Nymphaea sp*, *Oxalis griffithii*, *Typha latifolia*, *Azolla pinnata*, *Marsilea villosa* large number of exotic flora about (about 80 sp.) were reported from the Campus of University of Lucknow which include *Cicer arietinum*, *chrysanthemum marifolium*, *Coriandrum sativum*, *Cynodon dactylon*, *Eclipta prostrata*, *Ipomoea fistulosa*, *Lantana camara*, *Oxalis corniculata*, *Parthenium hysterophorus*, *Plumeria rubra*, *Ricinus communis*, *Tecoma stans*, *Ziziphus mauritiana* etc. Dominant flora of the Campus was herbaceous which about 75% of the total flora. Most frequently occurring herb are the *Leptadenia pirotechnica*, *Cynodon dactylon*, *Ageratum conyzoides*, *Blumea aromatica*, *Centipeda orbicularis*, *Parthenium hysterophorus*, *Eclipta prostrate* *Cosmos bipinnatus*, *Cannabis sativa*, *Canna indica*, *Ipomoea carnea*, *Coccinia grandis*. In this study no endemic species was reported from the campus of the Lucknow University. Ahmad (1999) had reported that endogangetic are poor in endemic species. *Rauvolfia serpentine*, *Smilax zeylanica*

and *Martynia Diandra* represents the threatened species of the campus flora.

The important medicinal plants growing in the campus of University of Lucknow includes *Adhatoda vasica* *Asteracantha Longifolia*, *Peristrophe roxburghiana*, *Achyranthes aspera*, *Catharanthus roseus*, *Rauvolfia serpentine*, *Eclipta prostrate*, *Cirsium arvense*, *Calendula arvensis*, *Mahonia japonica*, *Quisqualis indica*, *Diospyros montana*, *Saraca asoca*, *Senna siamea*, *Trigonella foenum graceum*, *Leucas procumbens*, *Mentha arvensis*, *Azadirachta indica*, *Tinspora cordifolia*, *Ficus benghalensis*, *Ficus religiosa*, *Morus nigra*, *Moringa oliefera*, *Cymbopogon flexuosus*, *Murraya koengii*, *Citrus sinensis*, *Aegle marmelos*, *Madhuca longifolia*, *Withania somnifera*, *Typha latifolia*, *Holoptelia integrifolia*, *Vitis vinifera*, *Aloe vera*, *Elettaria cardamomum*, *Curcuma longa*, *Ocimum canum* etc. *Mangifera indica*, *Shorea robusta*, *Saraca asoca*, *Dalbergia sissoo*, *Bombax ceiba*, *Azadirachta indica*, *Artocarpus lacucha*, *Artocarpus heterophyllus*, *Eucalyptus leucoxylon*, *Phoenix sylvestris*, *Bomboo*, *Santalum album*, *Madhuca longifolia*, *Holoptelia integrifolia*, *Tectona grandis*, etc. are the important timber yielding tree species of the flora of University of Lucknow. The edible fruit trees of the campus include *Mangifera indica*, *Annona squamosa*, *Carica Papaya*, *Tamarindus indica*, *Pithecellobium dulce*, *Artocarpus lacucha*, *Artocarpus heterophyllus*, *Musa acuminata*, *Syzygium cumini*, *Psidium guajava*, *Ziziphus mauritiana*, *Citrus sinensis*, *Citrus limon*, *Aegle marmelos*, *Madhuca longifolia*, *Vitis vinifera*. *A. nilotica*, *Aegle marmelos*, *mangifera indica*, *Bombex ceiba*, *Sterculia urens* and *A. indica* are the gums and resins yielding tree species of the university campus. *Madhuca indica*, *Holoptelea integrifolia* and *Agadiracta indica* are the important oil yielding tree species of the campus.

The important fodder yielding tree species of the campus includes *Albizia lebbeck*, *Dulbergia sissoo*, *P. pinnata*, *Ficus religiosa*, *Ficus racemosa*, *Ficus hispida*, *Ficus virens* and *Moringa oleifera*. *Ocimum canum* and *Agadiracta indica* are the important insecticide providing plants species of the University of Lucknow Campus.

Conclusion

Flora of the University of Lucknow is very vast and diversified which is dominated by angiospermic herbaceous plants. The asteraceae, poaceae and fabaceae constituent the dominant families of the campus flora. The Campus flora contain medicinal plant, timber yielding plant, oil yielding plants, fodder plants, fruity plants along with flowering and ornamental. This flora also comprises in to exotic and non-exotic type.

Table 1. General flora of University of Lucknow main Campus.

Angiosperm Acanthaceae	Botanical name	Habit	Uses
Arusa	Adhatoda vasica L.; syn.	Herb	Medicinal
Kulikhara	<i>Asteracantha Longifolia</i>	Herb	Medicinal
Magenta Plant	<i>Peristrophe roxburghiana</i> (Roem. Schult.) Br.	Herb	Chinese Medicine.
Alismataceae			
Arrowhead	<i>Sagittaria sagittifolia</i> Linn.	Herb	Edible tubers
Aizoaceae			
Ayam (Bis.)	<i>Trianthema monogyna</i> L.	Herb	Edible/medicinal
Horse purslanes	<i>Trianthema portulacastrum</i>	Herb	Edible/medicinal
Amaranthaceae			
Latjeera	<i>Achyranthes aspera</i> L.	Herb	Medicinal Properties
Cockscomb	<i>Celosia argentea</i> Linn.	Herb	Medicinal/ornamental
False Amaranth	<i>Digera arvensis</i> Forssk.	Herb	
Globe Amaranth	<i>Gomphrena globosa</i> Linn	Herb	Used for baby gripe
Amranthus	<i>Amaranthus caudatus</i> L.	Herb	Ornamentals
Lady bleeding	<i>A. hypochondriacus</i> L.	Herb	Edible
Amranthus	<i>Amaranthus retroflexus</i> L.	Herb	Culinary use
Cholai	<i>Amaranthus polygamosus</i> Linn.	Herb	Vegetable
Spiny Amaranth	<i>Amaranthus spinosus</i> Linn.	Herb	Vegetable
Slender Amaranth	<i>Amaranthus viridis</i> Linn	Herb	Herb
Palak	<i>Spinacea oleracea</i> L.	Herb	Vegetable
Hog Plums	<i>Spondias pinnata</i> (Koen.) Kurz	Herb	Edible fruit
Amaryllidaceae			
Onion	<i>Allium cepa</i> L.	Herb	Ingredient
Anacardiaceae			
Mango	<i>Mangifera indica</i> L.	Tree	Fruit/ timber
	<i>Spondias pinnata</i> (Koen.) Kurz	Tree	fruit
Annonaceae			
Sitafal/Sarifa	<i>Annona squamosa</i> L.[1]	Tree	Soft Drink And Jellies
Apiaceae			
Lao Coriander	<i>Anethum graveolens</i> L.	Herb	Condiment and vegetable
Dhaniya	<i>Coriandrum sativum</i> L.	Herb	Candiment
Wild Carrot	<i>Daucus vulgaris</i>	Herb	
Apocynaceae			
Alstonia	<i>Alstonia scholaris</i> R. Br.	Tree	
Sadabahar	<i>Catharanthus roseus</i> (L.) G. Don	Herb	Medicinal Uses
Karonda	<i>Carissa carandas</i> L.	Shrub	Condiment
Leptadenia	<i>Leptadenia pirotechnica</i> (Forssk.) Decne.		Vegetable /Medicine
Oleander	<i>Nerium olender</i> L.	Tree	Ornamental
White Frangipani	<i>Plumeria rubra acutifolia</i>		
Sarggandha	<i>Rauwolfia serpentina</i> Benth.	Herb	Medicinal
Chandni	<i>Tabernaemontana divaricata</i>	Tree	Flowers
Pinwheel flower	<i>Tabernaemontana orientalis</i> (L.)R. Br. Ex Roem and Schult	Tree	Flower

Araceae			
Lemna	<i>Lemna minor</i> L.	Aquatic	Food For Fish/Poultry
Poy	<i>Pinellia ternate</i> (Thunb.) Makino		Food
Araucariaceae			
Monkey Puzzletree	<i>Araucaria araucana</i> (Molina) K. Koch		Garden Tree
Arecaceae			
Toddy Palm	<i>Borassus flabellifer</i> L.		Food
Water cabbage	<i>Caryota urens</i> Linn.		
Coconut Palm	<i>Cocos nucifera</i> L.	Tree	Product/Food/ Fodder
Palmetto, cabbage	<i>Sabal palmetto</i> (Walt.) Lodd.		
Asclepiadaceae			
Apple of Sodom	<i>Calotropis procera</i> (Aiton) W. T. Aiton	Herb	Medicinal
Crown flower	<i>Calotropis gigantea</i> (Linn.) R. Br.	Shrub	Medicinal
Asparagaceae			
Garden Asparagus	<i>Asparagus officinalis</i> L.	Herb	Ornamental Plant
Dracaena	<i>Dracaena reflexa</i> Lam.	Shrub	Ornamental Plant
Asteraceae			
Adenostemma	<i>Adenostemma viscosum</i> Forst	Herb	Wild
Blueweed	<i>Ageratum conyzoides</i> L.	Herb	Wild
Blumea	<i>Blumea aromatica</i> DC.	Herb	Ornamental
Blumea	<i>Blumea lacera</i> DC.	Herb	Ornamental
Pink node flower	<i>Caesulia axillaris</i> Roxb.	Herb	Wild
Calendula	<i>Calendula arvensis</i> L.	Herb	Medicinal/ornamental
Centipeda	<i>Centipeda orbicularis</i> Lour.	Herb	Wild
Cornflower	<i>Centaurea cynus</i> L.	Herb	Ornamental
Centaurea	<i>Centaurea Montana</i> L.	Herb	Wild
Guldaudi	<i>Chrysanthemum indicum</i> L.	Herb	Ornamental Uses
Creeping thistle	<i>Cirsium arvense</i> (L.) Scop.	Herb	Wild
Cosmos	<i>Cosmos bipinnatus</i> cav.[1]	Herb	Ornamental
Dahlia	<i>Dahlia coccinea</i> Cav.	Herb	Ornamental
Dahlia	<i>Dahlia hybrid</i> Cav.	Herb	Decorative Dahlia
Bhringaraj	<i>Eclipta prostrate</i> (L.)L.	Herb	Medicinal
Parthenium Weed	<i>Parthenium hysterophorus</i> L.[1]	Herb	Grass
Berberidaceae			
Oregon grap	<i>Mahonia aquifolium</i> (Pursh) Nutt.	Tree	Ornamental
Mahonia	<i>Mahonia japonica</i> Nutt.	Tree	Medicinal
Bigniniaceae			
Trumpet Creeper	<i>Campsis radicans</i> seem.		Ornamental
Tecoma	<i>Tecoma stans</i> (1)		Ornamental
Boraginaceae			
Lasoda	<i>Cordial dichotoma</i> G. Frost.[1]	Tree	Used As A Vegetable
Brassicaceae			
Sarson	<i>Brassica comprestis</i> L.	Herb	Oil
Chandni	<i>Iberis amara</i> L.		Rheumatism And Gout
Mooli	<i>Raphanus sativas</i> L.	Herb	Vegetable
Cactaceae			
Anemone	<i>Cereus echinopsis</i>	Shrub	Wild
Cereus	<i>Cereus hildmannianus</i> k. schum	Shrub	Wild
Ferocactus	<i>Ferocactus echidne</i>	Shrub	Wild

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Opuntia	<i>Opuntia littralis</i> var. <i>vaseyi</i> mill.	Shrub	Wild
Cannabaceae			
Marijuana	<i>Cannabis sativa</i> L.	Sub shrub	Industrial Fiber, Recreation Medicine
Cannaceae			
Canna Lily	<i>Canna</i> indica L.	Herb	Horticultural
Capparidaceae			
Karil	<i>Capparis aphylla</i> Roth.		
Caricaceae			
Papaya	<i>Carica Papaya</i> L.	Tree	Chewing Gum,
Casuarinaceae			
Casuarina	<i>Casuarinas equisetifolia</i> L.	Tree	Medicinal
Combretaceae			
Spurge	<i>Euphorbia erecta</i> Hook.f.	Herb	Weed
Spurge	<i>Euphorbia hirta</i> L.	Herb	Weed
Madhu Malti	<i>Quisqualis indica</i>	Shrub	Medicine/ornamental
Marry Gold	<i>Tegtes erecta</i> L.	Herb	Ornamental
Amrakh	<i>Terminalia chebula</i> Retz.	Tree	Fruit
Convolvulaceae			
Pink Morning Glory	<i>Ipomoea carnea</i> Jace.	Herb	Making Paper
Cucurbitaceae			
Kundru	<i>Coccinia grandis</i> (L.) J. Voigt	Herb	Wild
Cyperaceae			
papyrus sedges	<i>Cyperus compressus</i> L.	Herb	Grass
<i>Cyperus</i>	<i>Cyperus difformis</i> L.	Herb	Grass
<i>Kyllinga</i>	<i>Kyllinga triceps</i> Rottb.	Herb	Grass
Dipterocarpaceae			
Sal	<i>Shorea robusta</i> Roth.	Tree	Timber
Ebenaceae			
Persimmon Trees	Diospyros montana L.	Tree	Medicinal
Euphorbiaceae			
Copper leaf	<i>Acalypha indica</i> L.	Herb	Ornamental
Variegated croton	<i>Codiaeum vaiegatum</i> (L.) A. Juss.	Shrub	Ornamental
Burma croton	<i>Croton californicus</i> L.	Shrub	Chinese medicine
<i>Poinsettia</i>	<i>Euphorbia prunifolia</i> Jacq.	Shrub	Ornamental
Pansutiya	<i>Euphorbia pulcherrima</i> Willd. Ex Klotzsch	Shrub	Ornamental
Barbados nut	<i>Jatropha curcas</i> L.	Shrub	Biodiesel
Jatropha	<i>Jatropha integerrima</i> L.	Shrub	Biodiesel
Shanghai Beauty	<i>Jatropha pandurifolia</i> Andr.	Shrub	Biodiesel
<i>Jatropha</i>	<i>Jatropha rosea</i>	Shrub	Ornamental
Stone breaker	<i>Phyllanthus niruri</i> L.	Herb	Medicinal
Castor Bean	<i>Ricinus communis</i> L.	Shrub	Seed, Root, Oil
Fabaceae			
SEM	<i>Lablab purpureus</i> (L.)	Herb	Vegetable/ Forage
Palash, Dhak	<i>Beutea monosperma</i> 9Lam) Taub.	Tree	Ornamental
Red tassel flower	<i>Callindra haematocephala</i>	Tree	Medicinal/ Ornamental
Golden shower	<i>Cassia fistula</i> L.	Tree	Medicinal
Cassia	<i>Cassia</i> L.	Herb	Forage

Chana	<i>Cicer arietinum</i> L.	Herb	Fodder
Sheasam	<i>Dalbergia sissoo</i> Roxb.	Herb	Medicine/Condiments
Poinciana	<i>Delonix regia</i> (Boj. Ex Hook)	shrub	Pulse
Touch-Me-Not	<i>Mimosa pudica</i> L. (1)	Tree	Timber, Resin, Fodder,
Kiwanch	<i>Mucuna pruriens</i> (L.) DC.	Herb	Medicinal
Jungle Jalebi	<i>Pithecellobium dulce</i> (Roxb.) benth.[2]	Tree	Ornamental / Medicine
Ashok	<i>Saraca asoca</i> (Roxb.) Wilde	Tree	Dishes, Pickling Agent
Kassod tree	<i>Senna siamea</i> (Lam.) Irwin. Et Barneby	Tree	flowering plants
Tamarind	<i>Tamarindus indica</i> L.	Tree	Furniture Making
Barseem	<i>Trifolium alexandrinum</i> L.	Tree	Ornamental
Methi	<i>Trigonella foenum graceum</i> L[1]	Tree	Edible fruit pulp
Hydrocharitaceae			
Hydrilla	<i>Hydrilla verticillata</i> (L. f.) Royle	Aquatic	Phytoremediation
Lamiaceae			
Glorybower	<i>Clerodendrum trichotomum</i> L.[1]		Ornamental
Bushmint	<i>Hyptis suaveolens</i> (L.) Poir.		Wild
Two-Flower Leucas	<i>Leucas procumbens</i> L.	Sub shrub	Medicinal use
Pudina	Mentha arvensis L.	Herb	Medicinal and cosmati
Tulsi	<i>Ocimum tenuiflorum</i> L.	Shrub	
	<i>Ocimum sanctum</i>	Shrub	
Leguminaceae			
Arhar	<i>Cajanus cajaan</i> (L.) Millsp.	Shrub	Pulse Food
Amaltas	<i>Cassia fistula</i> L.	Tree	
Pea	<i>Pisum sativum</i> L.	Herb	Pulse
Liliaceae			
Garlic	<i>Allium satva</i> L.	Herb	Condiment/ Medicine
Lomariopsidaceae			
Nephrolepis	<i>Nephrolepis biserrata</i> L.	Herb	Oenamental
Tuber ladder fern	Nephrolepis cordifolia (L.) K. presl.		Oenamental
Sword Fern	<i>Nephrolepis exaltata</i> (L.) Schott.		Ornamental
Lythraceae			
Mehandi	<i>Lawsonia Inermis</i> L.	Shrub	Refrigerant, Colour
Anar	<i>Punica granatum</i> L.	Shrub	Fruit/medicinal
Trapa	<i>Trapa natans</i> L.	Aquatic	Vegetable
Magnoliaceae			
Champa	<i>Michalia champa</i> L.	Shrub	Timber
Mallispermaceae			
<i>Seasampilos</i>	<i>Seasampilos arboria</i>	Tree	Medicinal
Malpighiaceae			
Malpegia	<i>Malpighia emerginata</i> L.	Herb	Sweet And Juicy Fruits
Malvaceae			
Indian mallow	<i>Abutilon indicum</i> (L.) Sweet	Shrub	Wild
Corchorus	<i>Corchorus acutangulus</i> Lamk.	Herb	Food and fiber
Sida	<i>Sida acuta</i> Burm. f.	Herb	Wild
Pamakani	<i>Hibiscus arnottianus</i> L.	Herb	Ornamental
Congo jute	<i>Urena lobata</i> L.	Herb	Wild
Gudhal	<i>Hibiscus rosa-sinensis</i> L.	Shrub	Ornamental
Tree cotton	Gossypium arboreum L.		Cotton fibre
Cotton	<i>Gossypium hirsutum</i> L.	Shrub	Oil/fodder/cotton

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Cotton Tree, Semal	<i>Bombax ceiba</i> L.	Tree	
False Mallow	<i>Malvastrum coromandelianum</i>	Herb	Herb
Meliaceae			
Neem	<i>Azadirachta indica</i> (L.) Adelb.	Tree	Medicinal Properties
Menispermaceae			
Guruch	<i>Tinospora cordifolia</i> (Thunb.) Miers	Herb	Medicinal Properties
Moraceae			
Indian Banyan	<i>Ficus benghalensis</i> L.	Tree	Traditional Medicine
Peepal	<i>Ficus religiosa</i> L.	Tree	Traditional Medicine
Common fig	<i>Ficus carica</i> L.	Tree	Culinary use
Mulberry	<i>Morus nigra</i> L.	Tree	Medicinal / Fruit
Badhal	<i>Artocarpus lacucha</i> Buch-Hum	Tree	Fruit
Jackfruit	<i>Artocarpus heterophyllus</i> Lam.[1][2]	Tree	Dietary Fibre
Moringaceae			
Moringa	<i>Moringa oleifera</i> Lam.	Tree	Medicinal
Musaceae	<i>Musa acuminata</i> Colla 1820	Tree	Food and fodder
Myrtaceae			
White iron bark	<i>Eucalyptus leucoxylon</i> L.	Tree	Oil/timber
Jambul	<i>Syzygium cumini</i> (L.) Skeels.	Tree	Fruit
Eucalyptus	<i>Eucalyptus melliodora</i>	Tree	Oil/timber
Guava	<i>Psidium guajava</i> L.	Tree	Fruit and medicine
Nelumbonaceae			
Indian lotus	<i>Nilumbo nucifera</i> Gaertn.	Aquatic	Ornamental
Nyctaginaceae			
Spiderlings	<i>Boerhavia diffusa</i> L.	Herb	Horticultural Settings
Bougainvillea	<i>Bougainvillea glabra</i> Comm. Ex Juss[1]	Shrub	Ornamental
Nymphaeaceae			
Nymphea	<i>Nymphaea</i> sp. L.	Aquatic	Vegetable, Ornamental
Oleaceae			
Bela	<i>Jasminum sambac</i> (L.) Aiton.	Shrub	Ornamental
Juhi	<i>Jasminum auriculatum</i>	Herb	Beautiful flower
Orchidaceae			
Epiphyte	<i>Bulbophyllum kupense</i> P.J. Cribb & B.J. Pollard[2]	Herb	Epiphyte
Oxalidaceae			
Wood sorrels	<i>Oxalis acetosella</i>	Herb	Food/medicinal
<i>Biophytum</i>	<i>Biophytum sensitivum</i> DC.	Herb	Medicinal
Oxalis	<i>Oxalis griffithii</i> L.	Aquatic	Poisonous
Palmae			
Khajoor	<i>Phoenix sylvestris</i> Roxb.	Tree	
Papaveraceae			
Mexican Poppy	<i>Argemone maxicana</i> L.	Herb	Treat Malaria
Red Poppy	<i>Poppy</i> sp.	Herb	Flowering Plant
Earth Smoke	<i>Fumaria officinalis</i> L.	Herb	Treat skin diseases
Papilionaceae			
Matar	<i>Pisam sativam</i> L.	Herb	Edible Fruit
Shisham	<i>Dalbergia sissoo</i> Roxb.	Tree	Timber

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Phyllanthaceae			
Leptopus	<i>Leptopus cordifolia</i> Decaisne	Shrub	Ornamental
Poaceae			
Bomboo	<i>Bomboo Kunth & Dumort</i>	Tree	Timber/ Ornamental
Indian Doab	<i>Cynodon dactylon</i> (L.) Pers.	Herb	Grass
Wheat	<i>Triticum aestivum</i> L.	Herb	Food
Signal grass	<i>Brachiaria ramosa</i> (L.) Stapf	Herb	Fodder
Lemon Grass	Cymbopogon flexuosus spreng.	Herb	Lemongrass Oil
Sorghum	<i>Sorghum bicolor</i> (L.) Moench	Herb	Grass
Kans	<i>Saccharum spontaneum</i> L.	Herb	Grass
Khus	<i>Vetiveria zizanoides</i> (L.) Roberty	Herb	Grass
Polygonaceae			
Knotgrass	<i>Polygonum coccineum</i> L.	Herb	Grass
Rumex	<i>Rumex nigricans</i> Hook	Herb	Grass
Mexican Creeper	<i>Antigonon leptopus</i> Hook. & Arn [1]		
Putranjivaceae			
Putranjiva (Putijia)	<i>Putranjiva roxburghii</i> wall.	Shrub	Medicinal
Ranunculaceae			
Larkspur	<i>Delphinium</i> L.	Tree	Toxic To Humans
Water crow foot	<i>Ranunculas aquitilis</i> L.	Herb	Wild
Rhamnaceae			
Ber	<i>Ziziphus mauritiana</i> Lam.	Tree	Fruit
Rosaceae			
Rose	<i>Rose</i> sp.	Shrub	Ornamental
Rubiaceae			
Ixora	<i>Ixora tomentosa</i> Roxb.	Shrub	Ornamental
Lokhandi	<i>Ixora parviflora</i> Vahl.	Shrub	Ornamental
Cadamba	<i>Neolamarckia cadamba</i> (Roxb.) Bosser	Tree	Garden tree
Rutaceae			
Curry Tree	<i>Murraya koenigii</i> (L.) Sprengel[1]	Shrub	Medicinal And Cooking
Narangi	<i>Citrus sinensis</i> (L.) Osbeck[1]	Tree	Fruit
Orange Jessamine	<i>Murraya paniculata</i> (L.) Jack.	Shrub	Traditional Medicine
Lemon	<i>Citrus limon</i> (L.) Burm. F.	Shrub	Antibacterial. Fruity
Bel	<i>Aegle marmelos</i> (L.) Corr. Serr.	Tree	Fruit/ Drink/ Medicine
Santalaceae			
Chandan	<i>Santalum album</i> L.	Tree	Oil and wood
Sapotaceae			
Mahua	<i>Madhuca longifolia</i> (J.Konig) J. F. Macbr	Tree	Wine/ Food Oil/Medicine
Spanish Cherry	<i>Mimusops elengi</i> L.	Tree	Medicinal
Scrophulariaceae			
Lindenbergia	<i>Lindenbergia indica</i> (L.) Kuntz.	Herb	Weed
Lindernia	<i>Lindernia crustacea</i> (L.) F. Muell	Herb	Weed

Solanaceae			
Chilli	<i>Capsicum indicum</i> L.	Herb	Candiment
Potato	<i>Salnum tuberosum</i> L.	Herb	Vegetable
Tex-Mex Tobacco	<i>Nicotiana plumbaginifolia</i> Viv.	Herb	Weed
Dhatura	<i>Datura metel</i> Sims.	Herb	Medicinal
Bhatkatiya	<i>Solanum xanthocarpum</i> Schrad. & Wendl.	Herb	Medicinal
Gooseberry	<i>Physalis minima</i> L.	Herb	Medicinal
Makoy	<i>Solanum nigrum</i> L.	Herb	Fruit and whole plants
Tomato	<i>Solanum lycopersicum</i> L.	Herb	Food
Brinjal	<i>Solanum melongena</i> L.	Herb	Vegetable
Raat Ki Rani	<i>Cestrum nocturnum</i> L.	Shrub	Medicinal/Ornamental
Ashwagandha	<i>Withania somnifera</i> (L.) Dunal.	Herb	Medicinal
Datura	<i>Datura stramonium</i> L.	Herb	Medicinal
Typhraceae			
Typha	<i>Typha latifolia</i> L.	Aquatic	Food, Medicine
Ulmaceae			
Indian Elm, Chilbil	<i>Holoptelia integrifolia</i> L.	Tree	Medicinal Properties
Verbenaceae			
Lantana	Lantana camara L.	Shrub	Wild shrub
Sagon	<i>Tectona grandis</i> L.	Shrub	Wood
Golden Dureta	<i>Duranta erecta</i> L.	Shrub	Ornamental Plant
Duranta	<i>Duranta repens</i> L.	Shrub	Ornamental
White Lantana	<i>Lantana odorata</i>	Shrub	Wild
Vitaceae			
Angoor	<i>Vitis vinifera</i> L.	Shrub	Medicinal Properties
Xanthorrhoeaceae			
Alove	<i>Aloe vera</i> (L.) burma.f.	Shrub	Folk Medicine
Zingiberaceae			
Cardamom	<i>Elettaria cardamomum</i> L.	Shrub	Medicinal/ Candiments
Turmeric	<i>Curcuma longa</i> L.[1]	Shrub	Spices/ Medicine
Pteridophytes			
Azollaceae			
Water velwet	<i>Azolla pinnata</i> R. Br.	Aquatic	N ₂ fixer
Dryopteridaceae			
	<i>Dryopteris filix-mas</i> (Linn.) Schott	Herb	Ornamental
Marsiliaceae			
Marcellia	<i>Marsilea villosa</i> L.	Aquatic	Ornamental
Equisetaceae			
Horsetail	<i>Equisetum moorei</i> L.	Herb	Weed
Salviniaceae			
Floating fern	<i>Salvinia natans</i> (L.) All.	Herb	Aquatic herb
Asian water moss	<i>Salvinia cucullata</i> Roxb.	Herb	Aquatic herb
Pteridaceae			
Adiantum	<i>Adiantum capillusveneris</i> L.	Herb	Horticultural Trade
Maidenhair Ferns	<i>Adiantum aleuticum</i> L.	Herb	Ornamental
Selaginellaceae			
Sellginella	<i>Sellginella Lepidophylla</i> (Hook. And Grev.) s.	Herb	Medicinal

Gymnosperm			
Pinaceae			
Bottle Brush	<i>Pinus sabiniana</i> Douglas ex D. Don	Tree	Timber
Ephedraceae			
Ephedra	<i>Ephedra distachya</i> L.	Herb	Medicinal
Cycaceae			
Sago cycad	<i>Cycus revoluta</i> Thumb.	Tree	Garden tree
Queen sago	<i>Cycus circinalis</i> L.	Tree	Garden tree
Cupressaceae			
Thuja	<i>Thuja occidentalis</i> L.	Shrub	Ornamental Tree
(Cypress)	<i>Cupressus</i> L.	Tree	Furniture Making
Zuniperus	<i>Zuniperus osteosperma</i> L.	Tree	Spice

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